WHAT IS CLAIMED IS:

1. A touch screen calibration system comprising:

    a touch screen having a plurality of terminals;

    a control circuit for applying at least one signal to said terminals and sensing an effect on the signal due to a touch on the touch screen;

    a switching circuit for applying a calibration impedance to the touch screen;

    a microprocessor configured to calculate a measurement error upon application of the calibration impedance, and responsive to a touch, to apply the measurement error to obtain a corrected touch position from a measured touch position.

2. The calibration system of claim 1, wherein the microprocessor is further configured to interpolate the offsets as a function of relative X, Y positions of the measured touch position.

3. The calibration system of claim 2, wherein the microprocessor is configured to interpolate the offsets using error correction equations containing coefficients calculated by solving simultaneous equations derived from a second order Taylor series expansion.

4. The calibration system of claim 1, wherein the microprocessor is further configured to periodically operate the switching circuit.

5. The calibration system of claim 4, wherein the microprocessor is further configured to change the periodicity of operating the switching circuit in response to a predetermined change in a sensed quantity.

6. The calibration system of claim 5, wherein the sensed quantity is temperature.

7. The calibration system of claim 1, wherein the microprocessor is further configured to prevent operation of the switching circuit at least while the touch screen is actively in use.

8. The calibration system of claim 1, wherein the plurality of terminals includes four terminals.

9. The calibration system of claim 8, wherein the four terminals are located one in each corner of the touch screen.

10. The calibration system of claim 1, wherein the same calibration impedance is applied to each terminal.

11. The calibration system of claim 1, wherein the touch screen is a capacitive touch screen.

12. The calibration system of claim 1, wherein the touch screen is a resistive touch screen.

13. A method for calibrating a touch screen comprising:
applying a signal to terminals of a touch screen;
applying a calibration impedance to the terminals;
sensing an effect on the signal of the calibration impedance applied to the terminals;
calculating an X, Y position indicated for each terminal upon application of the calibration impedance; and
calculating an error for each terminal and applying the errors to obtain a corrected touch position from a measured touch position.

14. The method of claim 13, further including interpolating the errors as a function of relative X, Y positions of the measured touch position.

15.   The calibration system of claim 14, wherein the step of interpolating uses error correction equations containing coefficients calculated by solving simultaneous equations that model the screen errors as a two dimensional Taylor series.

16.   A touch screen calibration system comprising:

a touch screen having a plurality of terminals;

a control circuit for applying a signal to at least one terminal and sensing an effect on the signal due to a touch on the touch screen;

a switching circuit for applying a calibration impedance to at least one terminal;

a microprocessor configured to calculate a gain error indicated for each terminal upon application of the calibration impedance, and responsive to the gain error, to apply the gain errors to obtain a corrected touch position from a measured touch position.

17.   The calibration system of claim 16, wherein the microprocessor is further configured to normalize the gain error.

18.   The calibration system of claim 17, wherein the microprocessor is further configured to store the normalized gain error.

19.   The calibration system of claim 17, wherein the microprocessor is further configured to apply the normalized gain error to the measured touch position.

20.   A touch screen calibration method comprising:

applying a signal to a touch screen;

applying a calibration impedance to at least one terminal of the touch screen;

sensing an effect on the signal of the calibration impedance applied to at least one terminal;

calculating a gain error indicated for each terminal upon application of the calibration impedance; and

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applying the gain error to obtain a corrected touch position from a measured touch position.

21. The touch screen calibration method of claim 20, wherein the touch screen comprises a capacitive touch screen.

22. The touch screen calibration method of claim 20, wherein the touch screen comprises a resistive touch screen.

23. A touch screen calibration method comprising:

applying a signal to a touch screen;

applying a calibration impedance to the touch screen;

sensing an effect on the signal of the calibration impedance;

calculating an error indicated upon application of the calibration impedance; and

applying the error to obtain a corrected touch position from a measured touch position.

24. The touch screen calibration method of claim 23, wherein the touch screen comprises a capacitive touch screen.

25. The touch screen calibration method of claim 23, wherein the touch screen comprises a resistive touch screen.

26. A touch screen calibration method comprising:

applying a signal to a touch screen;

applying a calibration impedance to the touch screen;

sensing an effect on the signal of the calibration impedance;

calculating an error indicated upon application of the calibration impedance; and

applying the error to determine if the touch screen is functioning within predetermined limits.

27.   The touch screen calibration method of claim 26, wherein the touch screen comprises a capacitive touch screen.

28.   The touch screen calibration method of claim 26, wherein the touch screen comprises a resistive touch screen.